L Number	Hits	Search Text	DB	Time stamp
4	2669	430/312,314,316-317.ccls.	USPAT;	2003/09/13 09:29
			US-PGPUB;	
			EPO; JPO;	
5	7866	438/584,622,624,637-638,700,702,723-724.ccl	IBM_TDB	2003/09/13 09:29
ا ا	7000	130/301/022/021/03/ 030/700/702/723 721.001	US-PGPUB;	2003/03/13 03.23
			EPO; JPO;	
			IBM TDB	
6	1913	dual adj damascene and (etch\$3 near3	USPAT;	2003/09/13 09:30
		stop\$4 or hardmask\$3 or hard\$4 near3	US-PGPUB;	
		mask\$3)	EPO; JPO;	
7	10406	430/312,314,316-317.ccls. or	IBM_TDB USPAT;	2003/09/13 09:31
'	10400	438/584,622,624,637-638,700,702,723-724.ccl		2003/03/13 09.31
			EPO; JPO;	
			IBM TDB	
8	723	(430/312,314,316-317.ccls. or	USPAT;	2003/09/13 09:31
		438/584,622,624,637-638,700,702,723-724.ccl		
		and (dual adj damascene and (etch\$3 near3	EPO; JPO;	
	1120	stop\$4 or hardmask\$3 or hard\$4 near3	IBM_TDB USPAT:	2002/00/12 00-45
9	1139	made kar adj damascene) or (((multilevel or multi adj level) same interconnect\$3) same	US-PGPUB;	2003/09/13 09:45
		semiconduct\$4)).ti,ab.	EPO; JPO;	ì
		35250	IBM TDB	
10	550	(((dual adj damascene) or (((multilevel or	USPAT;	2003/09/13 09:45
		multi adj level) same interconnect\$3) same	US-PGPUB;	
		semiconduct\$4)).ti,ab.) and etch\$3 adj	EPO; JPO;	
	507	stop\$4 same (insulat\$3 or dielectric\$4)	IBM_TDB	0000 (00 (10 00 46
11	527	<pre>((((dual adj damascene) or (((multilevel or multi adj level) same interconnect\$3)</pre>	USPAT; US-PGPUB;	2003/09/13 09:46
		same semiconduct\$4)).ti,ab.) and etch\$3	EPO; JPO;	
		adj stop\$4 same (insulat\$3 or	IBM TDB	
		dielectric\$4)) and (via or hole or void or	-	1
		opening or trench\$3 or plug\$3) same		
		(conduct\$4 or metal\$8)		
12	346		USPAT;	2003/09/13 09:46
		or multi adj level) same interconnect\$3)	US-PGPUB;	
		<pre>same semiconduct\$4)).ti,ab.) and etch\$3 adj stop\$4 same (insulat\$3 or</pre>	EPO; JPO; IBM TDB	
		dielectric\$4)) and (via or hole or void or	1511_155	
		opening or trench\$3 or plug\$3) same	•	
		(conduct\$4 or metal\$8)) and etch\$3 adj		
		stop\$4 same (resist or photoresist)		
13	179	, , , , , , , , , , , , , , , , , , , ,	USPAT;	2003/09/13 09:46
		or multi adj level) same interconnect\$3) same semiconduct\$4)).ti,ab.) and etch\$3	US-PGPUB; EPO; JPO;	
		adj stop\$4 same (insulat\$3 or	IBM TDB	
		dielectric\$4)) and (via or hole or void or	12.1_105	
		opening or trench\$3 or plug\$3) same	1	
		(conduct\$4 or metal\$8)) and etch\$3 adj		
		stop\$4 same (resist or photoresist)) and		
		(insulat\$3 or dielectric) same ((("USG"		
		or oxide or "O.sub."?) same (high adj		ļ
		density adj plasma or "HDP")) or (oxide or "O.sub."?) same (plasma adj enhanced adj		
		chemical adj vapor adj deposition or		
		plasma adj enhanced adj "CVD" or plasma		
		adj "ECVD" or "PECVD" or low adj pressure		
		adj chemical adj vapor adj deposition or		
		low adj pressure adj "CVD" or "LPCVD") or		
		spin adj on adj glass or "SOG" or tetra		
	i	adj ethyl adj ortho adj silicate or tetraethyl adj orto adj silicate or		
	1	tetraethyl adj orto adj silicate or tetraethyl adj orthosilicate or tetra adj		
	1	ethylorthosilicate or		
		tetraethylorthosilicate or "TEOS")		

14	1.00	[[[[]]]]] adi damassana) am	HCDAM.	2002/00/12 00:42
14	168	(((((((dual adj damascene) or (((multilevel or multi adj level) same	USPAT; US-PGPUB;	2003/09/13 09:47
		interconnect\$3) same	EPO; JPO;	
		semiconduct\$4)).ti,ab.) and etch\$3 adj	IBM TDB	
		stop\$4 same (insulat\$3 or dielectric\$4))	1511_155	
		and (via or hole or void or opening or		
		trench\$3 or plug\$3) same (conduct\$4 or		
		metal\$8)) and etch\$3 adj stop\$4 same		
		(resist or photoresist)) and (insulat\$3 or		
		dielectric) same ((("USG" or oxide or		
		"O.sub."?) same (high adj density adj		
		plasma or "HDP")) or (oxide or "O.sub."?)		
		same (plasma adj enhanced adj chemical adj		
		vapor adj deposition or plasma adj		
		enhanced adj "CVD" or plasma adj "ECVD" or		
		"PECVD" or low adj pressure adj chemical		
		adj vapor adj deposition or low adj		
		pressure adj "CVD" or "LPCVD") or spin adj		
		on adj glass or "SOG" or tetra adj ethyl		
		adj ortho adj silicate or tetraethyl adj		
		orto adj silicate or tetraethyl adj		
	•	orthosilicate or tetra adj		
		ethylorthosilicate or	ĺ	
		tetraethylorthosilicate or "TEOS")) and		
		(insulat\$3 or dielectric) same thick\$4		
15	84		USPAT;	2003/09/13 09:47
		(((multilevel or multi adj level) same	US-PGPUB;	
		interconnect\$3) same	EPO; JPO;	
		semiconduct\$4)).ti,ab.) and etch\$3 adj	IBM TDB	
		stop\$4 same (insulat\$3 or dielectric\$4))	_	
		and (via or hole or void or opening or		
		trench\$3 or plug\$3) same (conduct\$4 or		
		metal\$8)) and etch\$3 adj stop\$4 same		
		(resist or photoresist)) and (insulat\$3 or		
		dielectric) same ((("USG" or oxide or		
		"O.sub."?) same (high adj density adj		
		plasma or "HDP")) or (oxide or "O.sub."?)		
		same (plasma adj enhanced adj chemical adj		
		vapor adj deposition or plasma adj		
		enhanced adj "CVD" or plasma adj "ECVD" or		
		"PECVD" or low adj pressure adj chemical		
		adj vapor adj deposition or low adj		
		pressure adj "CVD" or "LPCVD") or spin adj		1
		on adj glass or "SOG" or tetra adj ethyl		
		adj ortho adj silicate or tetraethyl adj orto adj silicate or tetraethyl adj		
		orthosilicate or tetra adj		
		ethylorthosilicate or		
		tetraethylorthosilicate or "TEOS")) and		
		(insulat\$3 or dielectric) same thick\$4)		
		and etch\$3 adj stop\$4 same (((nitride or		
		"N.sub."?) same (plasma adj enhanced adj		
		chemical adj vapor adj deposition or		
		plasma adj enhanced adj "CVD" or plasma		
		adj "ECVD" or "PECVD")) or (silicon or		
		"Si") adj oxynitride or siliconoxynitride		
		or silicon adj "ON" or "SiON" or (tantalum		
		or "Ta") adj oxide or "Ta.sub.2" adj		
		"O.sub.5" or (zinc or "Zn") adj oxide or		
		"Zn" adj "O.sub."2 or "ZnO" or (zirconium		
		or "Zr") adj oxide or "Zr" adj "O.sub.2"		
		or (hafnium or "Hf") adj oxide or "HfO" or		
		(aluminum or "Al") adj oxide or "Al.sub.2"		
		adj "O.sub.3")		
				

16	77	((((((((dual adj damascene) or	USPAT;	2003/09/13	09:48
		(((multilevel or multi adj level) same	US-PGPUB;		
		interconnect\$3) same	EPO; JPO;		
		semiconduct\$4)).ti,ab.) and etch\$3 adj	IBM_TDB	1	
		stop\$4 same (insulat\$3 or dielectric\$4))	-		
		and (via or hole or void or opening or			
1		trench\$3 or plug\$3) same (conduct\$4 or			
		metal\$8)) and etch\$3 adj stop\$4 same			
		(resist or photoresist)) and (insulat\$3 or			
		dielectric) same ((("USG" or oxide or			
	}	"O.sub."?) same (high adj density adj			
		plasma or "HDP")) or (oxide or "O.sub."?)			
İ		same (plasma adj enhanced adj chemical adj		1	
		vapor adj deposition or plasma adj			
		enhanced adj "CVD" or plasma adj "ECVD" or			
		"PECVD" or low adj pressure adj chemical			
		adj vapor adj deposition or low adj			
		pressure adj "CVD" or "LPCVD") or spin adj			
		on adj glass or "SOG" or tetra adj ethyl			
		adj ortho adj silicate or tetraethyl adj			
		orto adj silicate or tetraethyl adj			
	1	orthosilicate or tetra adj	1		
		ethylorthosilicate or			
		tetraethylorthosilicate or "TEOS")) and			
		(insulat\$3 or dielectric) same thick\$4)			
		and etch\$3 adj stop\$4 same (((nitride or			
]	"N.sub."?) same (plasma adj enhanced adj			
		chemical adj vapor adj deposition or		1	
		plasma adj enhanced adj "CVD" or plasma			
		adj "ECVD" or "PECVD")) or (silicon or			
		"Si") adj oxynitride or siliconoxynitride			
		or silicon adj "ON" or "SiON" or (tantalum			
		or "Ta") adj oxide or "Ta.sub.2" adj	1		
		"O.sub.5" or (zinc or "Zn") adj oxide or	1		
		"Zn" adj "O.sub."2 or "ZnO" or (zirconium			
		or "Zr") adj oxide or "Zr" adj "O.sub.2"			
		or (hafnium or "Hf") adj oxide or "HfO" or	1		
		(aluminum or "Al") adj oxide or "Al.sub.2"			
		adj "O.sub.3")) and etch\$3 adj stop\$4	1		
	1	same thick\$4	1		

18	75	(((((((((dual adj damascene) or	USPAT;	2003/09/13 10:02
10	1 '3	(((multilevel or multi adj level) same	US-PGPUB;	2003,03,13 10.02
ĺ		interconnect\$3) same	EPO; JPO;	
	Ì	semiconduct\$4)).ti,ab.) and etch\$3 adj	IBM TDB	
		stop\$4 same (insulat\$3 or dielectric\$4))	1511_155	
		and (via or hole or void or opening or		
		trench\$3 or plug\$3) same (conduct\$4 or		
		metal\$8)) and etch\$3 adj stop\$4 same		
		(resist or photoresist)) and (insulat\$3 or		
		dielectric) same ((("USG" or oxide or		
		"O.sub."?) same (high adj density adj		
	İ	,		
		plasma or "HDP")) or (oxide or "O.sub."?)		
		same (plasma adj enhanced adj chemical adj	1	
}		vapor adj deposition or plasma adj		
		enhanced adj "CVD" or plasma adj "ECVD" or		
		"PECVD" or low adj pressure adj chemical		
		adj vapor adj deposition or low adj		
		pressure adj "CVD" or "LPCVD") or spin adj		
		on adj glass or "SOG" or tetra adj ethyl		
		adj ortho adj silicate or tetraethyl adj		
		orto adj silicate or tetraethyl adj		
		orthosilicate or tetra adj		
		ethylorthosilicate or		
		tetraethylorthosilicate or "TEOS")) and		
		(insulat\$3 or dielectric) same thick\$4)		
		and etch\$3 adj stop\$4 same (((nitride or		
		"N.sub."?) same (plasma adj enhanced adj		
		chemical adj vapor adj deposition or		
		plasma adj enhanced adj "CVD" or plasma		İ
		adj "ECVD" or "PECVD")) or (silicon or		
		"Si") adj oxynitride or siliconoxynitride		
	1	or silicon adj "ON" or "SiON" or (tantalum		
		or "Ta") adj oxide or "Ta.sub.2" adj		
		"O.sub.5" or (zinc or "Zn") adj oxide or		
		"Zn" adj "O.sub."2 or "ZnO" or (zirconium		
		or "Zr") adj oxide or "Zr" adj "O.sub.2"		
		or (hafnium or "Hf") adj oxide or "HfO" or		
		(aluminum or "Al") adj oxide or "Al.sub.2"		
		adj "O.sub.3")) and etch\$3 adj stop\$4		
		same thick\$4) and (conduct\$4 or metal\$8)		
		same (aluminum or "Al" or copper or "Cu"		
		or gold or "Au" or silver or "Ag" or		
		chrome or chromiumn or "Cr")		

19	59		USPAT;	2003/09/13 10:13
		(((multilevel or multi adj level) same	US-PGPUB;	
		interconnect\$3) same	EPO; JPO;	
		semiconduct\$4)).ti,ab.) and etch\$3 adj	IBM TDB	
		stop\$4 same (insulat\$3 or dielectric\$4))		
		and (via or hole or void or opening or		
		trench\$3 or plug\$3) same (conduct\$4 or		
		metal\$8)) and etch\$3 adj stop\$4 same		
		(resist or photoresist)) and (insulat\$3 or		
		dielectric) same ((("USG" or oxide or		
		"O.sub."?) same (high adj density adj		
		plasma or "HDP")) or (oxide or "O.sub."?)		
		same (plasma adj enhanced adj chemical adj		
		vapor adj deposition or plasma adj		1
		enhanced adj "CVD" or plasma adj "ECVD" or		
	-	"PECVD" or low adj pressure adj chemical		1
		adj vapor adj deposition or low adj		
		pressure adj "CVD" or "LPCVD") or spin adj		
		on adj glass or "SOG" or tetra adj ethyl		
		adj ortho adj silicate or tetraethyl adj		
		orto adj silicate or tetraethyl adj		
		orthosilicate or tetra adj		
		ethylorthosilicate or		
		tetraethylorthosilicate or "TEOS")) and		
		(insulat\$3 or dielectric) same thick\$4)		
		and etch\$3 adj stop\$4 same (((nitride or		
		"N.sub."?) same (plasma adj enhanced adj		
		chemical adj vapor adj deposition or		
		plasma adj enhanced adj "CVD" or plasma		
		adj "ECVD" or "PECVD")) or (silicon or		
		"Si") adj oxynitride or siliconoxynitride		ĺ
		or silicon adj "ON" or "SiON" or (tantalum		Į.
		or "Ta") adj oxide or "Ta.sub.2" adj		
		"O.sub.5" or (zinc or "Zn") adj oxide or		İ
		"Zn" adj "O.sub."2 or "ZnO" or (zirconium		
		or "Zr") adj oxide or "Zr" adj "O.sub.2" or (hafnium or "Hf") adj oxide or "HfO" or		
		(aluminum or "Al") adj oxide or "Al.sub.2"		
		adj "O.sub.3")) and etch\$3 adj stop\$4		
		same thick\$4) and (conduct\$4 or metal\$8)		
		same (aluminum or "Al" or copper or "Cu"		1
	1	or gold or "Au" or silver or "Ag" or		
	1	chrome or chromiumn or "Cr")) and	•	
		(conduct\$4 or metal\$8 or aluminum or "Al"		
		or copper or "Cu" or gold or "Au" or		
	-	silver or "Ag" or chrome or chromiumn or	•	1
		"Cr") same thick\$4		1
				The state of the s

	1 601	1//420/210 214 216 2171-	LUCDAM	1 2002 /00 /12 10 - 02
20	' 681		USPAT;	2003/09/13 10:07
		438/584,622,624,637-638,700,702,723-724.ccl	1	
		and (dual adj damascene and (etch\$3 near3	EPO; JPO;	
		stop\$4 or hardmask\$3 or hard\$4 near3	IBM_TDB	
	1	mask\$3))) not (((((((((dual adj		
	1	damascene) or (((multilevel or multi adj		
		level) same interconnect\$3) same		
		semiconduct\$4)).ti,ab.) and etch\$3 adj		
	1	stop\$4 same (insulat\$3 or dielectric\$4))		
		and (via or hole or void or opening or		
		trench\$3 or plug\$3) same (conduct\$4 or		
1		metal\$8)) and etch\$3 adj stop\$4 same		
		(resist or photoresist)) and (insulat\$3 or		
		dielectric) same ((("USG" or oxide or		
		"O.sub."?) same (high adj density adj		
		plasma or "HDP")) or (oxide or "O.sub."?)		
		same (plasma adj enhanced adj chemical adj		
		vapor adj deposition or plasma adj		
		enhanced adj "CVD" or plasma adj "ECVD" or		
		"PECVD" or low adj pressure adj chemical		
	1	adj vapor adj deposition or low adj		
		pressure adj "CVD" or "LPCVD") or spin adj		
		on adj glass or "SOG" or tetra adj ethyl		
		adj ortho adj silicate or tetraethyl adj		
	1	orto adj silicate or tetraethyl adj		
		orthosilicate or tetra adj		
		ethylorthosilicate or	}	
		tetraethylorthosilicate or "TEOS")) and		
	1	(insulat\$3 or dielectric) same thick\$4)		
•		and etch\$3 adj stop\$4 same (((nitride or		
		"N.sub."?) same (plasma adj enhanced adj		
		chemical adj vapor adj deposition or		
	1	plasma adj enhanced adj "CVD" or plasma		
		adj "ECVD" or "PECVD")) or (silicon or		
		"Si") adj oxynitride or siliconoxynitride		1
		or silicon adj "ON" or "SiON" or (tantalum		
		or "Ta") adj oxide or "Ta.sub.2" adj		
		"O.sub.5" or (zinc or "Zn") adj oxide or		
		"Zn" adj "O.sub."2 or "ZnO" or (zirconium		
		or "Zr") adj oxide or "Zr" adj "O.sub.2"	1	
1		or (hafnium or "Hf") adj oxide or "HfO" or	1	
1		(aluminum or "Al") adj oxide or "Al.sub.2"	1	
1		adj "O.sub.3")) and etch\$3 adj stop\$4	1	
		same thick\$4) and (conduct\$4 or metal\$8)	1	
		same (aluminum or "Al" or copper or "Cu"		
		or gold or "Au" or silver or "Ag" or		
		The state of the s		1

chrome or chromiumn or "Cr")) and (conduct\$4 or metal\$8 or aluminum or "Al" or copper or "Cu" or gold or "Au" or silver or "Ag" or chrome or chromiumn or "Cr") same thick\$4)